

ART. LIV. *Contributions to the Natural History of South Africa, &c.* By ANDREW SMITH, M.D., M.W.S., Corresponding Member of the Zoological Society; Honorary Member of the Mineralogical Society of Jena; Superintendant of the South African Museum; and Assistant Surgeon to the Forces.

MAMMALIA.

Pteropus Leachii, mihi.

P. supra fusco-cinereus, infra sordido-cinereus, caudâ liberâ.

Colour above a sort of brownish gray, beneath a dirty pale smoke gray; incisors short, strong, regular, and rounded at tips; head long; ears of moderate length and rounded at the apices; membranes blackish, interfemoral one only edging the inner side of each hinder extremity; tail free. Length from forehead to root of tail, four inches; length of tail, three-quarters of an inch; expanse of wings, thirteen inches. Found abundantly in the gardens about Cape Town during the fruit season, and often proves very destructive to vineyards in the night. A larger species of the same genus inhabits the interior, but I have not yet been able to obtain a perfect specimen. Named after the celebrated naturalist Dr. Leach, F. R. S.

Rhinolophus Geoffroyii, mihi.

R. supra ligneo-fuscus; subtus sublignicolor, membranis nigris, interfemorali transversè venosâ; caudâ vix præter apicem porrectâ; superiore membrana nasalis lobô supra acuminato.

Colour above wood brown, beneath lighter; membranes black, interfemoral one veined longitudinally, and the tip of the tail just extending beyond its posterior margin; upper lobe of nasal membrane pointed above; eyes small and nearly in front of the inner edges of auricles; ears large and patulous, nearly as long as the head, pointed, and each with an inferior lobe towards the base of the outer margin, which is separated from the principal by a deep intervening notch: interfemoral membrane semicircular behind. Length from the tip of nose to com-

mencement of interfemoral membrane, three inches; length of latter, one inch; expanse of wings, thirteen inches. Inhabits the whole of South Africa.

This species decidedly differs from both the *Rhinolophus affinis*, and *Rhinolophus minor*, of Horsfield, not only in size and colour, but also in the depth of the notch in the outer edge of the auricle, as well as in the form of the nasal appendages, &c.

Nycteris Capensis, mihi.

N. cervice et dorso nigro-fuscis, colli lateribus sordido-albis; partibus inferioribus subcinereis: membranis rubro-fuscis; apice tragi semicirculari cum cristâ villi albescentis.

Neck above and back blackish brown, sides of neck dirty white, below cinereous white with shades of blackish; membranes reddish brown; height of ears without from fur to tip, $\frac{7}{8}$ of an inch, width better than $\frac{6}{8}$; tragus short, apex semicircular and its upper edge clothed with a tuft of long, white, woolly fur; termination of tail but slightly forked, last vertebra but one if any thing the shortest. Length from nose to root of tail, better than two inches; expanse of wings, ten inches. Found in the interior parts of South Africa as well as upon the Eastern coast.

Nycteris affinis, mihi.

N. cervice et dorso rubro-fulvis; colli lateribus rubro-albis; a tergo aurium subrufa; partibus inferioribus fulvo-albis; membranis nigro-fuscis; dentibus primoribus maxilla in paria dispositis.

Neck above and back reddish brown or tawny, sides of neck before wings reddish white; behind ears somewhat rufous; beneath tawny white, membranes blackish brown. Incisors of upper jaw in pairs which are separated from each other by a distinct open space immediately in the front of the jaw. Length from nose to root of tail, two inches; ears rather longer and broader than in the last species; tragus short, and its apex semicircular; termination of tail deeply forked, with the last vertebra but one the longest.

The arrangement of the incisors of the upper jaw, the marked difference in respect to the last joint but one of the tail, added to the

depth of the fork, and the greater proportion of transverse veins, in the portion of the interfemoral membrane connected with the joint named, tend, with other characters, to establish this as a distinct species from the last.

Vespertilio Capensis, mihi.

V. supra flavo-fuscus, subtus flavo-albus; membranis nigro-fuscis, interfemorali longè ultra pedes extensâ et posticè acuminatâ, ubi caudæ est terminatio; auriculis indentatis externè, et apicibus sub-acutis, trago lineari, subfalciformi.

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Above yellowish brown, beneath yellowish white; membranes blackish brown, the interfemoral one extending considerably beyond the feet and pointed behind, where the tail terminates; auricles indented on their outer edges and with their tips sub-acute; tragus linear and falciform; head short, its sides and the muzzle bare and black, lips margined towards the angles of the mouth with strong brownish hair. Length of body, an inch and three-quarters; length of tail, three-quarters of an inch; expanse of wings, nine inches.

This species has a strong affinity to the *Vespertilio Temminckii* of Dr. Horsfield, and perhaps when the two are accurately compared together will be found to be the same, and the trifling apparent differences to be dependent upon changes which take place during the preparation of specimens. In the Cape example the posterior part of the interfemoral membrane is inclined to a semicircular form, whilst in that of Java it will be found to be more acuminated. Other slight differences are also observable, independent of those of colour and size.

GENUS MACROSCELIDES. *mihi.*

Dentes primores $\frac{2}{2}$, discreti seu dimoti; superiores verticales compressi et acuminati; inferiores procumbentes aciebus incisoriis. Laniarum $\frac{4}{4}$, supra primoribus breviores, discreti, lateribus compressi et coronis plus minusve bicuspidatis; infra approximati, et partim ita imbricati ut posteriorum margo anterior antecedentium lateribus paullum obducatur; anterior tricuspidatus; secundus, tertius et quartus bicuspidati. Molares $\frac{2}{2}$, supra anterior quinquedensidatus, tertius et quartus quadricuspidati, quintus subtriangularis et

tricuspidatus; infrà, duo anteriores lateribus compressi, tricuspidati; tertius, quartus et quintus quadricuspidati; summâ dentium in maxillâ viginti, et totidem in mandibulâ. Rostrum angustum et anticè in proboscidem longam et subcylindraceam desinens, nares in apice habens. Oculi mediocres. Auriculæ magnæ et rotundatæ. Corpus villosum. Cauda elongata, squamata, annulata, raropilosa. Pedes distincti, plantigradi, pentadactyli. Ungues falculares. Scelides antepedibus multo longiores. Genus post Soricem Linnæi locum tenet.

Macroscelidès typus, mihi.

M. suprâ fuscus nitore fulvo, infrâ subalbus.

Above brown brightened by an intermixture of tawny; beneath whitish; extremities covered with a very short whitish hair; ears within scantily furnished with some of a similar colour, without nearly bare; tail thinly clothed with a stiff short black hair; whiskers near the base of the proboscis, each hair variegated black and white; claws short, black, compressed and pointed. Length from nostrils to root of tail, four inches and three quarters; length of tail, three inches and a quarter.

Inhabits the open flat country in the interior of South Africa, and is occasionally seen during the day, about the roots of bushes or amongst small brushwood, from whence, upon being discovered, it instantly retreats to its natural and subterranean habitation.

Chrysochloris Hottentotus, mihi.

C. rostro elongato, nudo et rufo; fronte plus minusve albo variegatâ; corpore rufo-fusco ad ferrugineum transiente.

Muzzle slightly elongated, its tip bare and flesh coloured; forehead more or less variegated with white; body reddish brown passing into ferruginous or chesnut. In young specimens the colour is more or less of a dark blackish green; and even in old ones, portions of the head and back have often tinges of that hue. Length about four inches. Inhabits the interior parts of South Africa, but has not, as far as I know, been yet found in the vicinity of Cape Town, where the *Chrysochloris Capensis* is so abundant.

Mangusta Urinatrix, mihi.

M. subnigra aut nigro-fusca; crinibus dorsi et caudæ ferè ad apicem, etiamque totius capitis, circulis coloris subrubri aut subalbidi variegatis; caudá attenuatá apice simplici acuto.

Colour of upper parts inclined to black or blackish brown, with most of the hairs having one or more broad circles of reddish white; under parts of the same general colour, but with few of the variegations just mentioned. On the sides of the head the dark and light colours are nearly in equal proportions; on the centre the latter is rather less abundant, as is also the case on the chin and beginning of the throat. Head rather broad behind, muzzle narrow, nose blackish brown, irides cinnamon coloured, pupils transverse: toes very long, slender, and almost without fur; claws dark, inclined to black; ears rounded and projecting but little beyond the hair. Length from nose to root of tail, one foot five inches; from root to tip of tail, thirteen inches; the latter tapers to a slender point, but is thick and bushy towards its origin. Inhabits marshy spots, as well as the banks of the smaller rivers, throughout the whole of South Africa; and in search of its food, which is frogs, crabs, &c., it is very often observed to dive under water and remain there for several minutes together. Appears to have considerable affinity to the *Mangusta Javanica* of Horsfield* but differs therefrom in its resorts, &c.

Mangusta Le Vaillantii, mihi.

M. suprâ rubro-fulva, pilis fuscis et nigricantibus intermixtis variegata; infrâ subfulva; apice caudæ albo.

Colour throughout reddish yellow inclining to chesnut, with the upper parts in particular slightly variegated by an intermixture of brown and blackish hairs; tail of the same colour, with the exception of the tip which is pure white. Eyes reddish brown; pupils transverse. Length from tip of nose to root of tail, one foot five inches; length of the tail, about ten inches. This species is common throughout the whole of

* Zoological Researches in Java and the neighbouring Islands, by T. Horsfield, M. D., F. L. S., M. G. S., 4to., London, 1824.

South Africa, inhabiting a dry flat country, and distinguished by the white tip of the tail just adverted to. Named after the celebrated South African traveller Le Vaillant.

Myoxus erythrobronchus, mihi.

M. supra fusco-griseus; latera rufo-alba; infra cinereus; ingluvie, gutture, parte anteriore pectoris, latere interiore antepedum, et margine labii superioris ferrugineis.

Colour above brownish gray; sides reddish white; under part cinereous; space under lower jaw, throat, anterior part of breast, insides of fore legs, and edges of upper lip ferruginous; ears roundish and projecting considerably beyond the fur, bare and flesh coloured both without and within; whiskers long, bushy, and black; muzzle moderately long and inclined to pointed; tail bushy, more particularly towards the tip, and throughout of a dirty reddish hue; fur soft and silky. Found inhabiting trees in many of the forests of South Africa.

GENUS DENDROMUS. *mihi.*

Dentes primores, utrinque duo, supra paginâ anticâ sulco longitudinali exarata; infra longi, graciles, scalpro cuneato. Pro lamariis diastema. Molares utrinque terni: supra, primus tuberculis sex in duplici serie, duobus præterea indistinctis quorum unum ad anteriorem partem coronæ dentis, alterum juxta alterum seriei internæ tuberculum, ponè lamina transversa incisoria; secundus duabus aut tribus longitudinalibus laminis incisoriiis secus marginem externum coronæ suæ, cujus in medio tria aut quatuor obtusa tubercula transversa seriatim jacent; tertius duabus laminis incisoriiis transversis sulco interjacente: infra, primus tuberculis sex, ferè in duplici serie; secundus quatuor obtusis eodem ordine dispositis; tertius perparvus, undatis aliquot laminis transversis et sulcis interjectis. Rostrum acutum. Labrum fissum. Auriculæ oblongæ nudiusculæ, et intùs juxta cranium duabus valvulis transversis, membranaceis, quarum inferior meatui auditorio externo superjacet. Cauda elongata, annulata, raropilosa. Pedes distincti ambulatorii, antici digitis tribus et verrucâ hallucari, postici pen-

tadactyli. Ungues falculares. Positio adhuc in familiâ Murum non bene determinata est; sed fortasse post Murem locum habet.

Dendromus typus, mihi.

D. suprâ fuscus aut ferrugineus; infrâ rubro-albus; caudâ elongatâ; lined nigâ indistinctâ et longitüdinali in medio dorso.

Colour above brown passing to ferrugineous, beneath reddish white; whiskers long, partly black and partly white; upper lip white; ears without and within slightly covered with a fine short white reddish fur; extremities the same; tail pointed, considerably longer than the body, and of a faint grayish brown colour; along the centre of the back, particularly towards the tail, an indistinct black line. Length from point of nose to root of tail, three inches and a half; length of tail, four inches and a half. This little animal is usually found upon the branches of trees, &c.; and in such situations it constructs its nest and brings forth its young.

Sciurus ocularis.

S. suprâ cæruleo-canus, subtùs albescens; rostro maculâque supra, et unâ post singulas aures albis; ingluvie ferrugineâ, latere capitis cum lined nigâ transversâ.

Above bluish gray; beneath whitish, muzzle together with a spot above and another behind each ear white, space behind chin rufous; head crossed on each side by a narrow black line which includes the eye, tail bushy and penniform, above grayish, below blackish. Length from nose to root of tail, 4 inches; length of tail, $3\frac{1}{2}$ inches.

The only example of this species which I have seen was found in a hollow tree near Plettenberg's Bay.

Bathyergus Ludwigii, mihi.

B. suprâ rufo-griseus in cæruleo-griseum transiens, subtùs eodem colore, sed minùs austero; incisores omnes anticè plani.

Above reddish gray passing into bluish gray; beneath the same but lighter, incisors all plain in front, legs and feet reddish, the latter edged with stiff white hairs. Length from nose to root of tail, six inches; length of tail itself about half an inch. The colour in young specimens is

throughout a deep slate hue. This species is not of quite so robust a form as the *Bathyergus Capensis*, which it resembles otherwise in point of size; nor has it the variegations about the head which the latter at all stages of its growth more or less exhibits. Inhabits various parts of South Africa, but is much less frequent than the other species just mentioned. Like it, the present frequents gardens, and proves very destructive to bulbous roots, which it searches for, both by burrowing under ground, and digging from the surface.

Lepus rufinucha. *Kleine Klip Haas* of the Colonists.

L. suprâ griseo-fuscescens nigro inspersus, subtus albus, nuchâ rufâ; caudâ suprâ nigrâ, subtus albâ.

Above grayish brown, thinly mottled with black, beneath white; anterior extremities reddish brown, posterior of the same colour as the back without, but on the inner and anterior aspects pure white; tip of nose and a narrow space round the eyes white, also a line of the same colour, but less bright, descends on each side of the neck from the hinder part of the ear to the chin, which is most distinct when the head is closely retracted to the shoulders. Centre of face with a considerable tinge of reddish brown, ears long, erect, and with rounded tips, without thinly covered with hair of the same colour as that of the back, within with a fine white down, through which is distinctly seen the natural colour of the skin; nape of neck a light rufous or chesnut hue, with the hair parted in the middle, and directed towards the sides, thereby exhibiting an appearance like that displayed by the feathers on the breasts of many water-fowls. Length from nose to root of tail, fourteen inches; length of tail, nearly two inches; height about six inches. Inhabits rocky and mountainous situations in South Africa.

Perhaps this may be the *Lepus saxatilis* of F. Cuvier, which is too concisely described in the translation of "The Animal Kingdom," to permit its being recognised.

Phocæna Homeii, mihi.

P. suprâ nigra pura, capitis corporisque lateribus nigricante et albo variegatis; dentibus suprâ utrinque quadraginta, infrâ sex et triginta; posteriori pinnæ dorsalis margine falcato.

Colour above pure black ; sides of the head and body clouded black and white ; belly white. On each side an indistinct dusky band or stripe commences immediately under the dorsal fin, and descends obliquely downwards and backwards till it terminates on the under and posterior part of the body, also a dusky coloured circle round each eye. Below, the anterior part of the lower jaw, and a space of nearly a foot and a half before the tail, dusky. Snout short, pointed, and not readily distinguished from the anterior part of the head, teeth slightly curved, convexities outwards, forty on each side above, below thirty-six. Pectoral fins long and pointed, arched before, and concave behind, with the exception of a small portion towards the root of each, which consists of a rounded projection. Dorsal fin rather nearer tail than head, large, high, and pointed, with its hinder edge falciform ; caudal semilunar, and with a narrow slit or fissure at the termination of the back ; usual length six feet. Inhabits the seas about the Cape of Good Hope, and is often caught in Table Bay. Named after Sir Everard Home, Bart., V. P. R. S.

SERPENTIA.

Fam. Dendrophidæ. GENUS BUCEPHALUS. *mih*.

Caput cubiforme multò latius collo ; maxilla quatuor dentium ordinibus omnium solidorum præter paucos posteriores ordinis externi qui a radicibus usque ad apices canaliculati sunt ; corpus subgracile ad medium crassiusculum ; in singulis scutorum lateribus præsertim prope caput distincta cutis laxæ plicæ ; cauda gracilis teres circa quartam totius longitudinis partem duplici subtis squamarum serie ; squamæ corporis carinatae, cingulis transversis curvatis ordinatae.

Bucephalus typus, mih.

Suprà fuscus, subtis argenteo-griscus fusco tinctus.

Head thick and clumsy ; colour above an uniform lightish brown ; beneath silvery gray speckled with brown ; irides green ; last scuta of abdomen divided ; length between five and six feet ; thickness rather greater than that of a man's thumb. Found upon branches of trees, as well as on the ground, in the eastern districts of South Africa.

Bucephalus Jardinii, mihi.

Suprà nigro-viridis, subtùs croceus in viridi-croceum transiens.

Scuta 188. Squamæ 108.

Head as in the last ; back and sides blackish green ; under parts yellow, with a black line extending along the posterior margin of each scutum. In the male, the first and more or less of the second row of scales on each side of the scuta are yellow ; length from five to six feet, thickness rather greater than the foregoing. Found on branches of trees about Cape Town and its vicinity. Named in honor of the distinguished ornithologist, Sir William Jardine, Bart.

Bucephalus gutturalis, mihi.

Suprà viridi-fuscus, parvâ maculâ viridi-albâ in plurimis squamis variegatus ; subtùs griseo-fuscus, fusco maculatus ; initium juguli fasciâ transversâ rutilo-flavâ distinctum.

Scuta 192. Squamæ 129.

Colour above and on sides greenish brown, most of the scales with a light greenish white mark ; below light grayish brown, mottled with a dark greenish brown ; a transverse orange-coloured band towards commencement of throat ; length about three feet ; thickness about that of a man's fore-finger. Found upon branches of trees in the forests on the eastern coast.

Bucephalus Bellii, mihi.

Suprà nigro-viridis, maculâ parvâ viridi-albâ in plurimis squamis ; subtùs flavo-viridis ; singula scuta lined obscurâ transversâ in margine posteriori.

Colour above a sort of blackish green, with most of the scales marked by a small greenish white dot ; below yellowish green, with the hinder edge of each scutum margined by a transverse blackish line ; length from five to six feet ; thickness nearly that of the typical species, and is found inhabiting similar situations. Named after the celebrated ophiologist, Thomas Bell, Esq.

Fam. Anodontidæ. GENUS ANODON. *mihi*.

Maxilla et mandibula edentulæ ; hiatus mediocris ; corpus nonnihil supra carinatum, longum, et gracile ; cauda teres.

Anodon typus, *mihi*.

Suprà cinereus seriebus tribus macularum nigrarum ; subtùs argenteus ; squamæ carinatæ.

Colour above cinereous, passing to bluish gray or reddish gray, with three rows of irregular shaped black spots, and carinated scales ; below a shining silvery hue ; length from two to three feet ; thickness about that of a man's little finger. Found in the vicinity of Cape Town, and also on the west coast, as far as the Orange River. Lives principally upon eggs, which it swallows entire.

PISCES.

Fam. Squalidæ. GENUS RHINCODON. *mihi*.

Dentes graciles breves leniter curvati, ordinibus longitudinalibus ita dispositi ut lineæ in anteriore maxillæ, nec non et mandibulæ parte jacentis, speciem habeant ; caput latum, depressum, quadrangulare, os ad apicem capitis cui latitudine ferè par est ; latera liris longitudinalibus et carina perquam distincta in utroque caudæ latere ; spiraculum a tergo utriusque oculi ; pinna analis alteri pinne dorsali pænè opposita.

Rhincodon typus, *mihi*.

Suprà viridi-griseus maculis et lineis albis numerosis ; subtùs rubro-albus ad rubrum transiens ; dorso ante anteriorem suam pinnam carinato, post rotundato, deinde plano.

Colour of back and sides greenish gray, with numerous white spots, varying in size from that of a sixpence to a halfpenny ; also several white lines on the sides of the head, body and about the branchiæ ; below reddish white, passing into vermilion red, anterior part of back carinated, posterior rounded or flat. Length of the specimen from which the descrip-

tion was taken, fifteen feet; greatest circumference nine feet. Was caught by fishermen in Table Bay during the month of April, 1828, and the skin was purchased for £6. sterling, and forwarded to the Paris Museum.

ART. LV. *On the Fish known in Jamaica as the Sea-Devil.*
 By E. N. BANCROFT, M.D., Corresponding Member of
 the Zoological Society, &c.

ON Thursday, the 8th of May, 1828, a fish of extraordinary dimensions, which occasionally visits the mouth of this harbour (Kingston), and is called Sea-Devil by the fishermen, was caught by Major General Sir John Keane, Lieutenant Governor, assisted by Lieutenant St. John, of the Royal Artillery, Mr. Read, Ordnance store-keeper, and some other adventurous officers. It was struck with the first harpoon at about eight o'clock A.M., and was not overpowered and killed till four P.M., when it was hauled up on the Ordnance Wharf in this city. Its resistance had been considerable, and its strength was sufficient to drag, from time to time, three or four boats fastened one to another, at the rate of four miles per hour. The Lieutenant Governor was pleased to present the fish to the Jamaica Society; and as I then had reason to believe that it had never been described with sufficient accuracy to enable naturalists to ascertain its true characters, I gladly availed myself of the opportunity thus kindly offered, and very rarely met with, to take such notes of its structure, organs, &c. as will, I hope, suffice to remove the existing doubts concerning its classification. From these the statement now submitted to the Society has been prepared. To show how much obscurity has existed (and probably still exists) in regard to certain species, or individuals, of the Ray family that have been met with of an enormous size, and more particularly in regard to those which some ichthyologists have named *Raia Giorna*, *Raia Mobular*, *Raia Fabroniana*, *Raia Banksiana*, and *Raia Manatia*, I may mention that Cuvier (whose authority ought justly to be

* The Jamaica Society for the encouragement of Agriculture and of other arts and sciences, before whom this paper was originally read.